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REVISIONS IN THE PRODUCTION OF CREAMERY BUTTER,
CHEESE, AND ICE CREAM, BY STATES, 1916-1939

AND

PRODUCTION AND UTILIZATION OF MILK,
UNITED STATES,
1924-1952

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

WASHINGTON, D.C.
DECEMBER 1953

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
WASHINGTON, D. C.

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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
WASHINGTON, D. C.

REVISIONS OF MANUFACTURED DAIRY PRODUCTS DATA, 1916 THROUGH 1939

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The collection of data on the production of manufactured dairy products was started by the Department of Agriculture in 1917 under the provisions of the War Emergency Act. Although the reporting of such information by manufacturers of dairy products to the Department was mandatory, the coverage during the early years was hampered by lack of adequate lists of manufacturers, the need for educating manufacturers on the procedures of reporting, etc., and their reluctance to report. It was recognized at the time, and later, that the published production of butter, cheese and ice cream for the early years was an undermeasure of the actual production.

With the expiration of the War Emergency Act in 1920, the Department no longer had the authority to require manufacturers to report their production. Because of numerous requests from the dairy industry, business, State and Federal agencies, consumers of dairy products, etc., the Department agreed to carry on the work of collecting data on the production of dairy products on a voluntary reporting basis, even though it was recognized that numerous problems of working toward completeness were involved and that any figures obtained through voluntary reports were likely to be short of actual productions.

In the early 20's many of the State legislatures began to authorize some State agencies to collect and publish data on the State production of manufactured dairy products. Beginning in 1925, the Bureau of Agricultural Economics, which was then handling the manufactured dairy products work for the Department of Agriculture, began to work out cooperative agreements with those State agencies that had the authority to require manufacturers of dairy products in their States to report their production. The results of this program were extremely satisfactory, and by 1940 all of the most important dairy States were covered by cooperative agreements.

Recognizing that the statistics of production of manufactured dairy products were understated in most States prior to 1940 and in all States prior to 1929, the staff of the present Dairy Statistics Branch set up a project several years ago to rectify the underenumeration of butter, ice cream, American cheese, and all other cheese, except cottage, pot, and bakers, by States, from 1917 in butter, 1918 in cheese, 1916 in ice cream, through 1939. All tabulations subsequent to 1939 are considered to be relatively complete so that no revisions have been made from 1940 to date.

The first two steps in this project were (1) to review all of the tabulations for these 4 commodities for the earlier years, and (2) to check all early publications listing the names and addresses of manufacturers of dairy products. The early tabulations were then corrected for missing plants and missing reports. The third step was to collect all available State data on the production of butter, cheese and ice cream for the years between 1916 and 1939, and similar biennial data from the Census Bureau through its Census of Manufactures for the period of 1919 to 1939, inclusive, for comparison with the figures published by or available in the Bureau of Agricultural Economics. The general policy of accepting the largest figure on the production of a particular product for a particular State for a particular year was followed in the procedure. However, this was not done in all cases, for occasionally it was found that a State or Census figure might not fit into the trend line of the State series, the Bureau, or the Census series for that State. In cases of this kind, the most reasonable figure was adopted.

In comparing the revised figures of the production of butter, cheese, and ice cream with the published figures for the period under revision, it will be observed that the revisions for the earlier years were moderately substantial for butter, cheese, and ice cream. However, the revisions of butter were considerably smaller than the revisions for cheese and ice cream.

Both aspects of these revisions were a logical expectation. In the first place, the Department's fact collecting program for the manufactured dairy products industry improved through experience and additional facilities over a period of time. Furthermore, the inauguration of the Department's cooperative program with State agencies for collecting data on the dairy industry which started in 1925, began to bear fruit by the late 20's, and by 1939 had reached the point where it was barely short of actual enumeration. Also, in the earlier years, the existence of the names and locations of creameries was rather easily ascertained, and as they were operated mostly by Americans, the collection of reports on production was not too difficult. On the other hand, the problem of covering cheese plants in the fact-finding program was aggravated by the fact that many of them were small, located in out-of-the-way places, and operated, for the most part, by cheese makers brought from European countries whose ability to speak English and to make out reports was limited.

The collection of adequate data on the production of ice cream from 1916 through 1939 was complicated by the output of numerous drug stores and, later, so-called counter freezers and roadside stands which made their own mix. Some allowance for the output of such outlets was made, but later analysis indicated that such allowances were inadequate. But, in the early 30's with Boards of Health, both State and local, gradually extending their control from a sanitary standpoint over the production of ice cream by drug stores, counter freezers, etc. Many in the beginning and later all stopped making their own mix and began buying it from commercial mix manufacturers. This made it somewhat easier to obtain, through such manufacturers, the names and locations of stands, etc. producing ice cream for sale over the counter. Also, along about the same time, many State agencies began requiring annual licenses for retail manufacturing outlets such as drug stores, counter freezers, roadside stands, etc. producing ice cream and other frozen dairy products for sale at retail over the counter. This furnished an additional source of the names and locations of retail ice cream units producing for sale at retail.

All of these factors were carefully considered in making revisions of ice cream production from 1916 through 1939 and explains why such revisions continued large in the 30's when those for butter and cheese tapered off rather sharply following 1929. By 1939, however, the revisions for ice cream had dropped to about the same level as the level for the revision for butter and cheese.

In 1940, Dr. Edmund E. Vial, then Senior Agricultural Statistician in the Department's Bureau of Agricultural Economics, issued a report entitled "Production and Consumption of Manufactured Dairy Products", Technical Bulletin 722, in which he published the results of a project in which he had revised the data on production of butter, cheese, and ice cream at the National levels only, for the years 1916 through 1929. Dr. Vial made no attempt to revise the individually published State figures, so that for the years covered by his project, the State figures did not add up to the National totals as revised.

In making his National revisions, Dr. Vial used somewhat the same technique as that used by the authors in using the data published by the Census Bureau for its Census of Manufactures, but for the intercensal or even years he departed from the authors' method by basing his estimates upon the changes in receipts of butter and cheese at the principal central markets. His revisions for ice cream production were largely an acceptance of the Census Bureau figures for the odd years and a straight line trend for the even years.

The authors in making the current historic revisions for butter, cheese and ice cream started at the State level, using all of the information that could be obtained from the Bureau of the Census and State sources for making the State revisions. The National revisions were then reached by adding the individual State production as revised. In addition to the revised data for the years 1916 through 1929, the authors also revised the figures for the years of 1930 through 1939 which were not covered by Dr. Vial.

The revised figures on the production of butter, cheese, and ice cream appearing in this publication not only supersede the original figures as published by the United States Department of Agriculture for the years 1930-1939 but also the original figures as published by the Bureau for the years 1916 through 1929 and the revisions at National levels published by Dr. Vial in 1940.

Table 1 .- Historic Revisions of Creamery Butter Production, by States, 1917-1939

State	1917	1918	1919	1920	1921	1922	1923	1924
	--- Thousand Pounds ---							
Maine	1,522	1,483	1,272	825	719	596	402	568
N. H.	622	559	517	500	531	420	530	271
Vt.	13,998	12,065	12,883	14,759	15,447	13,093	12,947	13,298
Mass.	2,555	2,457	2,865	3,198	3,895	2,999	2,396	2,290
R. I.	190	210	197	198	144	115	111	105
Conn.	1,075	910	1,019	970	1,218	1,086	980	520
N. Y.	16,426	15,927	15,728	19,123	28,323	26,444	22,032	26,257
N. J.	174	134	190	143	214	264	438	642
Pa.	16,200	13,100	14,590	13,900	17,688	15,365	15,501	14,400
Ohio	52,248	55,888	53,882	70,300	90,063	92,200	88,171	85,436
Ind.	37,039	40,625	44,904	40,200	52,872	49,800	51,687	55,300
Ill.	34,891	39,884	44,648	41,074	48,879	47,259	51,687	61,500
Mich.	52,830	50,500	55,843	53,600	62,329	66,344	71,577	74,392
Wis.	101,325	94,900	97,992	107,500	138,693	153,600	153,267	161,032
Minn.	126,105	133,160	146,295	135,230	169,848	193,907	218,965	250,646
Iowa	78,850	86,945	90,916	89,180	106,516	130,382	152,846	160,378
Mo.	24,782	30,185	38,418	35,228	45,694	49,560	54,932	61,801
N. Dak.	14,526	16,550	19,537	17,500	20,745	22,675	23,355	29,215
S. Dak.	16,090	18,636	17,613	14,323	19,323	21,146	27,447	24,543
Nebr.	56,800	62,477	60,467	56,663	66,653	74,809	76,748	81,423
Kans.	33,950	37,220	36,567	32,899	37,000	40,204	42,674	48,800
D. C.	1	6	6	503	577	475	10	-
Del.	274	270	285	380	485	253	160	150
Md.	464	297	315	440	620	542	362	500
Va.	1,314	1,524	1,732	2,327	3,350	3,306	4,231	5,125
W. Va.	160	200	356	867	530	420	337	466
N. C.	920	730	885	875	1,300	1,549	1,718	1,683
S. C.	97	17	27	16	19	165	537	527
Ca.	10	4	6	7	85	979	1,942	1,950
Fla.	50	39	17	-	11	81	99	70
Ky.	2,885	3,561	5,950	7,875	10,745	12,010	12,671	13,124
Tenn.	2,538	2,068	3,735	5,903	8,707	9,164	13,237	13,960
Ala.	721	912	696	510	885	1,030	1,071	1,080
Miss.	3,200	3,300	3,474	3,430	4,882	5,278	5,715	5,848
Ark.	244	429	363	345	586	731	996	1,259
La.	93	70	46	55	160	87	185	145
Okla.	7,550	8,470	10,807	9,990	11,002	11,440	14,119	14,720
Tex.	7,800	7,580	10,911	11,925	14,302	12,980	13,517	14,400
Mont.	4,200	5,200	6,094	5,860	7,465	7,816	10,980	14,179
Idaho	5,019	5,030	5,273	5,300	5,746	7,980	10,023	13,600
Wyo.	1,850	1,480	1,325	1,120	1,485	1,550	1,894	1,991
Colo.	12,500	13,450	13,983	13,500	16,406	16,910	18,665	18,500
N. Mex.	40	95	57	36	29	129	185	251
Ariz.	2,538	1,455	1,040	950	1,522	1,820	1,946	2,107
Utah	3,910	3,520	4,411	4,200	5,345	6,460	7,836	8,785
Nev.	3,096	4,174	3,796	2,018	2,388	2,642	2,631	2,640
Wash.	17,900	18,100	20,238	23,751	23,228	24,241	26,919	29,785
Oreg.	13,233	15,365	14,433	14,990	17,399	19,621	23,230	23,992
Calif.	59,200	60,359	62,449	68,127	72,254	74,010	81,948	78,562
U. S.	834,005	871,520	939,053	937,190	1,138,408	1,226,437	1,327,101	1,423,116

Table 1.—Historic Revisions of Creamery Butter Production, by States, 1917-1939 (Continued)

State	1925	1926	1927	1928	1929	1930	1931	1932
			--- Thousand Pounds ---					
Maine	509	577	544	348	301	253	150	90
N. H.	145	97	72	44	28	22	8	—
Vt.	10,594	8,524	7,435	6,350	5,137	4,250	3,645	2,650
Mass.	2,544	2,560	3,432	2,498	1,570	2,060	1,470	1,390
R. I.	67	75	100	69	48	34	33	15
Conn.	729	663	599	412	409	407	522	390
N. Y.	18,602	14,571	13,126	11,849	9,462	9,899	10,356	9,777
N. J.	179	67	101	45	45	65	86	57
Pa.	11,981	12,482	12,778	12,688	12,409	12,280	12,317	13,090
Ohio	85,560	88,050	87,766	83,150	89,350	84,055	86,128	85,100
Ind.	55,720	58,934	62,436	60,409	62,701	63,249	67,991	75,507
Ill.	73,786	69,768	67,643	69,097	73,887	68,576	73,900	75,601
Mich.	75,400	73,140	69,379	65,920	63,427	65,926	75,601	78,609
Wis.	171,696	170,600	164,621	138,060	150,442	173,411	176,091	170,899
Minn.	267,601	270,890	278,539	275,490	288,530	285,150	289,165	290,500
Iowa	168,363	172,258	166,989	196,068	214,563	216,319	219,428	219,531
Mo.	62,607	71,749	73,421	77,847	86,951	82,178	82,313	84,400
N. Dak.	32,682	35,044	34,803	31,284	41,889	41,032	50,412	49,336
S. Dak.	29,203	31,003	35,783	35,700	40,894	40,900	42,080	39,700
Nebr.	83,929	90,882	96,263	99,042	100,199	86,391	86,850	86,400
Kans.	50,095	52,765	53,714	57,838	60,430	58,571	70,239	74,500
D. C.	461	52	50	47	42	41	48	56
Del.	79	67	50	243	183	211	380	610
Md.	455	289	229	6,051	5,882	5,255	5,740	6,060
W. Va.	4,929	5,150	375	425	466	507	426	540
N. C.	1,592	1,781	2,235	1,959	2,230	2,130	2,115	2,805
S. C.	428	420	470	407	496	504	648	924
Ga.	1,950	2,056	3,244	2,480	2,280	2,510	2,102	2,638
Fla.	56	142	169	280	239	239	263	316
Ky.	14,611	17,058	20,202	19,988	20,633	17,806	19,048	20,470
Tenn.	12,397	13,201	18,190	16,500	19,230	15,975	15,197	16,518
Ala.	1,339	1,083	1,687	1,419	2,154	2,184	2,089	2,637
Miss.	5,596	7,096	8,220	7,805	8,444	6,800	7,460	8,887
Ark.	1,173	1,489	1,710	1,456	2,985	2,345	3,795	5,705
La.	145	195	324	461	882	705	1,452	1,885
Okla.	16,439	20,374	25,681	26,262	27,510	26,666	31,628	38,150
Tex.	14,777	15,391	24,933	22,100	27,500	25,827	31,291	36,500
Mont.	14,795	15,664	16,759	16,365	18,684	16,792	17,864	14,182
Idaho	16,729	20,238	21,288	22,156	24,175	26,486	28,918	28,918
Wyo.	2,201	2,612	2,448	2,360	2,864	2,835	2,748	2,520
Colo.	19,295	18,953	21,005	21,614	22,420	22,643	21,993	21,974
N. Mex.	349	455	447	430	566	951	1,080	927
Ariz.	1,801	1,503	2,193	2,495	2,613	2,294	3,042	2,780
Utah	8,146	8,546	10,508	10,184	11,793	12,485	12,307	13,040
Nev.	2,594	2,432	2,191	2,231	2,278	1,993	2,021	1,895
Wash.	29,484	31,100	31,757	30,100	30,229	32,468	37,503	35,612
Oreg.	23,771	24,828	26,206	25,781	25,341	26,818	29,062	29,029
Calif.	74,591	74,118	77,325	76,786	72,806	74,366	73,350	73,854
U. S.	1,462,924	1,511,537	1,580,647	1,542,603	1,641,707	1,525,864	1,594,236	1,725,373

(Continued)

Table 1 .- Historic Revisions of Creamery Butter Production, by States, 1917-1939 (Continued)

State	1933	1934	1935	1936	1937	1938	1939
			Thousand Pounds				
Maine	75	60	55	65	75	119	80
N. H.	-	-	-	-	-	-	-
Vt.	2,480	2,240	2,817	2,649	3,244	2,996	2,355
Mass.	1,470	1,560	1,260	1,040	912	640	282
R. I.	12	8	19	14	16	17	8
Conn.	370	335	230	185	180	153	138
N. Y.	14,096	15,194	14,034	14,592	16,891	15,596	17,052
N. J.	35	40	48	40	35	41	20
Pa.	14,250	14,720	16,780	14,550	14,119	14,100	14,441
Ohio	85,500	83,400	85,152	84,200	84,780	85,950	84,329
Ind.	76,508	77,062	73,935	67,112	66,607	71,139	68,972
Ill.	74,800	78,430	78,689	71,340	71,205	79,650	78,043
Mich.	79,637	76,438	77,439	82,162	80,987	86,757	90,088
Wis.	158,430	162,442	160,725	172,500	177,052	188,933	173,227
Minn.	305,200	281,250	280,270	296,180	280,105	301,604	297,325
Iowa	239,125	238,313	218,822	208,926	200,362	229,604	233,541
Mo.	88,540	86,750	87,543	76,910	82,211	95,600	84,480
N. Dak.	50,799	43,960	42,550	45,575	44,267	45,385	50,708
S. Dak.	43,393	38,948	36,122	38,741	33,896	36,105	41,022
Nebr.	94,900	93,200	78,715	74,800	65,718	69,000	81,236
Kans.	82,700	79,750	70,279	64,200	69,808	78,840	80,108
D. C.	-	-	-	-	-	-	-
Del.	55	42	30	29	36	42	46
Md.	930	1,180	1,570	1,677	1,996	2,290	2,320
Va.	5,910	6,193	6,353	6,318	6,508	7,478	7,035
W. Va.	570	475	693	775	2,454	2,984	2,733
N. C.	2,878	2,434	2,433	2,420	2,448	2,764	2,232
S. C.	948	775	785	720	600	622	523
Ga.	3,247	2,345	2,219	1,975	2,045	2,135	1,849
Fla.	221	184	239	169	146	222	160
Ky.	22,530	21,580	22,119	22,125	22,101	24,520	21,276
Tenn.	17,433	15,795	15,920	15,555	16,550	20,270	17,161
Ala.	2,404	1,838	1,528	1,477	1,524	1,689	1,452
Miss.	8,169	7,190	6,767	6,190	6,243	7,640	5,753
Ark.	5,890	5,340	5,503	5,527	6,853	7,588	6,311
La.	1,879	1,589	1,519	1,595	1,614	1,730	1,730
Okla.	42,250	39,500	41,999	38,450	46,167	51,407	51,412
Tex.	38,540	31,200	28,580	33,500	35,791	38,300	38,145
Mont.	14,795	13,069	12,577	11,586	10,608	11,567	12,308
Idaho	29,756	29,317	29,418	29,917	30,728	32,974	33,988
Wyo.	2,560	2,258	2,144	2,312	2,794	2,870	3,073
Colo.	23,909	22,699	16,261	21,491	21,125	22,287	22,696
N. Mex.	990	955	1,227	1,830	2,934	2,890	3,555
Ariz.	2,070	1,270	1,999	2,277	1,987	2,548	2,569
Utah	13,050	10,335	8,971	10,890	11,839	11,335	10,545
Nev.	1,846	1,607	1,477	1,669	2,272	2,439	2,350
Wash.	34,146	35,170	37,299	35,680	36,594	37,109	36,586
Oreg.	27,308	28,318	29,918	29,285	29,617	31,205	31,217
Calif.	77,406	70,986	64,377	64,850	66,430	67,082	65,254
U. S.	1,795,010	1,727,844	1,671,509	1,666,070	1,662,374	1,798,404	1,781,737

Table 2.—Historic Revisions of Total American Cheese, by States, 1918-1939 1/

State	1918	1919	1920	1921	1922	1923	1924	1925
			-- Thousand Pounds --					
Maine							34	50
N. H.	59	25	3	77				6
Vt.	1,750	3,450	1,882	1,880	1,300	1,400	1,755	1,218
Mass.	32	4						
R. I.								
Conn.				2				
N. Y.	39,510	50,510	33,829	48,070	55,730	49,190	41,509	39,501
N. J.	106	446	130	200	334	196	155	
Pa.	2,930	3,580	2,970	3,580	2,550	2,900	2,350	2,411
Ohio	1,515	1,300	1,150	1,200	500	450	675	525
Ind.	54	90	62	177	62	78	306	353
Ill.	1,952	3,240	1,540	2,200	3,300	3,875	3,500	3,865
Mich.	4,750	5,580	4,380	5,431	5,603	6,021	5,922	7,098
Wis.	201,400	235,730	215,500	217,738	215,400	264,597	274,200	298,277
Minn.	7,121	9,098	7,002	8,000	7,091	8,229	9,790	9,444
Iowa	1,287	959	645	520	640	660	730	801
Mo.	280	302	402	572	296	360	255	297
N. Dak.								
S. Dak.	27	32	9	19		8	43	43
Nebr.	60	77	95	131	43	68	135	275
Kans.	34	25	19	61	147	110	176	192
D. C.			43					
Del.					4			
Md.		93	9	29	6			
Va.	59	60	35	28	128	167	152	69
W. Va.	24	56	24	41	16			
N. C.	211	228	109	86	103	181	80	62
S. C.								
Ga.						3	44	24
Fla.	2							
Ky.								37
Tenn.	44	51	26	50	71	284	398	347
Ala.				29		51		
Miss.								
Ark.					18			
La.		1						
Okla.	3	1			2		37	9
Tex.	25	1		15	31			
Mont.	449	269	233	113	259	641	792	1,296
Idaho	2,133	2,578	1,722	2,117	3,368	5,311	7,450	8,352
Wyo.	1,332	1,612	1,280	1,677	3,416	1,791	1,883	1,923
Colo.	308	361	381	354	42	99	434	333
N. Mex.					74	135	92	56
Ariz.	443	365	350	450	47	84	96	125
Utah	1,127	1,071	959	1,184	3,219	2,139	2,162	1,753
Nev.	1			25	24	45	79	66
Wash.	884	1,345	1,143	1,910	2,928	2,762	2,998	3,125
Oreg.	7,666	8,848	8,482	8,777	10,023	10,951	10,903	10,903
Calif.	6,530	6,560	7,340	7,300	6,820	5,680	6,400	6,655
U. S.	284,208	338,256	291,754	313,983	323,595	367,765	375,533	399,592

Table 2.- Historic Revisions of Total American Cheese, by States, 1918-1939 (Continued) 1/

State	1926	1927	1928	1929	1930	1931	1932
	--- Thousand Pounds ---						
Maine	128	139	88	89	85	83	76
N. H.	-	-	-	-	-	-	-
Vt.	1,254	946	802	713	1,399	514	332
Mass.	-	-	-	-	-	-	-
R. I.	-	-	-	-	-	-	-
Conn.	-	-	-	-	-	-	-
N. Y.	31,663	24,931	31,075	26,072	29,219	26,299	22,586
N. J.	-	-	-	-	307	-	-
Pa.	1,823	1,837	2,236	1,271	1,990	1,820	1,601
Ohio	550	750	1,136	1,500	1,250	1,151	1,555
Ind.	333	776	5,143	8,903	11,243	13,731	14,417
Ill.	3,873	3,562	5,141	6,625	5,611	5,644	10,030
Mich.	7,325	6,528	8,233	9,020	6,955	6,662	6,495
Wis.	275,265	271,450	256,508	247,506	246,686	243,109	227,751
Minn.	9,014	7,620	9,163	10,980	9,086	8,432	7,578
Iowa	629	870	1,078	1,325	1,183	1,260	1,016
Mo.	412	684	2,777	4,442	3,380	3,480	4,050
N. Dak.	-	25	3	-	-	27	148
S. Dak.	79	110	121	367	468	772	442
Nebr.	818	1,735	3,090	3,985	3,173	1,883	1,490
Kans.	245	302	2,192	2,930	3,988	4,445	4,613
Del.	-	-	-	-	-	-	-
Md.	-	-	-	-	-	-	13
Va.	80	126	607	1,013	439	417	197
W. Va.	-	1	1	-	-	-	-
N. C.	61	76	225	526	402	364	508
S. C.	-	-	-	-	123	220	127
Ga.	-	-	99	-	-	-	-
Fla.	-	-	-	3	-	-	-
Ky.	40	65	125	1,578	2,003	2,240	3,075
Tenn.	187	154	665	2,458	2,518	2,347	2,386
Ala.	-	-	1,210	1,093	37	35	-
Miss.	-	198	2,531	4,628	4,438	4,901	5,748
Ark.	-	-	-	1,023	1,363	1,540	1,329
La.	-	9	25	107	17	109	144
Okla.	5	5	20	196	602	906	3,249
Tex.	-	25	983	2,402	2,919	4,406	6,641
Mont.	1,484	1,435	2,347	1,990	1,612	1,609	1,586
Idaho	7,986	7,434	8,001	7,537	8,530	5,486	6,087
Wyo.	2,118	2,138	2,185	2,331	2,619	1,696	1,514
Colo.	773	1,233	2,906	3,039	2,896	2,141	2,000
N. Mex.	-	-	39	-	-	-	-
Ariz.	462	486	152	98	109	120	171
Utah	1,809	2,205	2,592	3,287	3,044	3,497	3,156
Nev.	80	99	88	86	48	22	-
Wash.	3,430	3,324	4,250	4,650	5,145	5,330	7,783
Oreg.	13,216	11,435	11,051	12,580	14,727	15,777	15,532
Calif.	5,674	5,620	6,856	6,352	6,007	7,210	8,554
U. S.	370,816	358,343	375,744	382,705	385,621	379,695	374,480

Table 2 .- Historic Revisions of Total American Cheese, by States, 1918-1939 (Continued) 1/

State	1933	1934	1935	1936	1937	1938	1939
			Thousand Pounds				
Maine	60	57	1	2	42	33	-
N. H.	-	-	-	-	-	-	-
Vt.	386	420	801	1,106	1,222	794	695
Mass.	-	-	-	-	-	-	-
R. I.	-	-	-	-	-	-	-
Conn.	-	-	-	-	-	-	-
N. Y.	26,286	25,951	20,597	22,079	29,542	26,141	21,970
N. J.	-	-	-	-	-	-	-
Pa.	2,130	2,098	1,820	1,410	1,420	1,765	1,654
Ohio	2,150	3,135	5,276	8,513	9,575	10,790	11,240
Ind.	16,042	22,699	21,441	24,305	26,107	27,198	24,186
Ill.	12,150	15,530	19,500	21,091	26,656	31,241	29,207
Mich.	8,932	9,694	10,550	12,509	12,639	13,990	13,328
Wis.	238,692	252,105	270,851	270,851	243,003	281,977	284,035
Minn.	8,892	9,775	10,624	11,595	13,298	15,232	13,118
Iowa	1,383	1,742	2,958	4,339	4,011	3,745	3,124
Mo.	5,100	5,530	9,000	8,200	10,409	12,229	13,156
N. Dak.	18	-	-	-	-	-	-
S. Dak.	965	1,375	1,088	1,040	859	993	1,038
Nebr.	1,660	1,786	1,725	1,550	1,571	2,032	1,553
Kans.	6,844	7,257	7,407	6,331	6,794	8,531	9,529
D. C.	-	-	-	-	-	-	-
Del.	1	1	-	-	-	-	-
Md.	1	74	-	-	-	-	2
Va.	268	149	-	42	41	73	57
W. Va.	-	-	-	-	211	380	217
N. C.	321	468	457	424	441	428	428
S. C.	87	51	105	183	194	236	185
Ga.	-	26	127	273	433	217	151
Fla.	-	-	-	-	-	-	-
Ky.	3,950	4,500	6,000	5,596	5,989	6,901	5,346
Tenn.	2,686	3,245	6,725	7,439	8,508	13,065	12,459
Ala.	1,255	1,525	1,723	1,609	1,972	1,909	1,532
Miss.	6,264	5,906	6,997	7,822	9,292	11,006	8,165
Ark.	1,330	1,150	1,710	2,243	3,279	3,102	2,476
La.	164	212	222	319	416	546	334
Okla.	6,220	6,210	6,454	6,340	7,266	7,713	5,786
Tex.	8,095	7,197	8,465	13,940	16,804	19,600	15,720
Mont.	1,970	1,563	1,852	1,548	1,087	1,433	1,184
Idaho	5,506	6,165	6,822	7,666	8,240	9,512	9,215
Wyo.	1,374	477	498	735	450	781	863
Colo.	2,246	2,593	1,513	1,946	1,610	2,099	1,860
N. Mex.	-	-	-	-	260	1,164	792
Ariz.	33	25	222	99	127	122	156
Utah	4,493	5,091	4,277	4,925	3,626	4,193	4,419
Nev.	-	-	-	-	-	19	22
Wash.	7,524	8,523	9,262	8,289	8,865	9,086	9,550
Oreg.	15,251	16,421	16,129	16,332	19,076	19,599	19,907
Calif.	12,189	11,165	10,737	10,338	9,834	10,961	9,887
U. S.	412,917	441,917	475,011	493,229	495,269	531,088	539,058

1/ Includes all whole milk types such as Cheddar, colby, wash curd, Monterey, jack, and granular.

Table 3.- Historic Revisions of All Other Cheese Than Whole Milk and Full-skim American and Cottage Cheese, by States, 1918-1939

State	1918	1919	1920	1921	1922	1923	1924	1925
			-- Thousand Pounds --					
Maine								
N. H.	348	251	697	557	516	632	180	96
Vt.	450	800	757	496	782	1,044	414	681
Mass.	68	103	77		1		62	
R. I.	3	4						
Conn.	21			24				
N. Y.	30,600	36,800	32,057	27,715	23,341	15,609	18,729	17,500
N. J.	362	399	563	490	340	225	915	1,701
Pa.	10,031	11,093	8,968	7,728	6,299	5,315	5,134	4,997
Ohio	3,596	3,921	3,248	3,831	4,161	4,236	4,065	3,482
Ind.	136	165	145	165	44	96	60	207
Ill.	2,905	3,272	2,445	2,518	2,434	2,784	3,907	4,030
Mich.	5,625	6,471	4,405	4,652	2,903	1,515	1,537	753
Wis.	65,957	71,535	66,721	63,398	60,128	64,350	57,107	63,977
Minn.	531	657	500	200	247	221	153	611
Iowa	113	79	79	60	72	97	97	74
Mo.					1		5	5
N. Dak.								
S. Dak.		24						
Nebr.					1	3		5
Kans.								3
D. C.								
Del.	111	200	147	130	66	2		
Md.	139	195	150	175	54	18		
Va.	6				30	95		
W. Va.			5					
N. C.	3					1	3	
S. C.		1						
Ga.								
Fla.								
Ky.								
Tenn.				6	1			
Ala.								
Miss.								
Ark.								
La.								
Okla.		6						
Tex.	8	17		4	6		2	9
Mont.	32	99	33	86	63	101	180	69
Idaho	4	5	5			5	327	300
Wyo.			9				62	
Colo.	486	647	950	1,596	1,436	1,422	1,126	1,295
N. Mex.								
Ariz.	186	179	177	172	85	130	429	476
Utah	18		6				12	
Nev.								
Wash.	491	581	301	220	218	300	266	313
Oreg.	272	508	300	223	232	300	275	300
Calif.	2,483	3,020	3,395	1,749	1,483	1,813	846	620
U. S.	124,985	141,132	126,141	116,193	104,924	100,314	95,893	101,504

Table 3 .- Historic Revisions of All Other Cheese Than Whole Milk and Full-skim American and Cottage Cheese, by States, 1918-1939 (Continued)

State	1926	1927	1928	1929	1930	1931	1932
			Thousand Pounds				
Maine	-	-	-	-	-	-	-
N. H.	47	-	-	-	-	-	-
Vt.	509	297	126	8	14	1	3
Mass.	114	247	393	681	471	608	418
R. I.	-	-	-	-	-	-	-
Conn.	-	-	-	-	-	-	-
N. Y.	18,519	23,494	25,897	27,841	29,038	26,612	23,986
N. J.	52	175	237	141	403	300	400
Pa.	3,990	3,997	4,709	2,823	2,278	1,903	2,017
Ohio	2,812	3,257	3,505	3,895	4,043	5,506	5,332
Ind.	62	21	750	1,209	815	973	848
Ill.	4,657	6,240	5,372	6,446	5,000	4,716	4,500
Mich.	663	920	532	664	1,610	884	738
Wis.	59,802	58,595	55,360	62,330	69,892	66,163	68,163
Minn.	412	413	562	508	468	444	492
Iowa	90	86	86	113	234	384	319
Mo.	-	4	9	-	-	-	6
N. Dak.	-	-	-	-	-	2	-
S. Dak.	-	-	22	-	-	-	-
Nebr.	10	4	-	13	124	61	211
Kans.	16	113	1	4	224	120	-
D. C.	-	-	-	-	-	-	-
Del.	-	-	-	-	-	-	-
Md.	1	1	1	-	-	-	-
Va.	-	-	-	59	646	416	-
W. Va.	-	-	-	1	3	1	5
N. C.	-	-	-	-	40	206	-
S. C.	-	-	-	-	-	6	-
Ga.	-	-	-	-	-	-	-
Fla.	-	-	-	-	-	-	-
Ky.	-	-	-	1	2	-	-
Tenn.	-	-	-	361	-	265	624
Ala.	-	-	-	-	-	-	-
Miss.	-	-	-	-	14	89	191
Ark.	-	-	42	728	405	3	85
La.	169	6	50	21	13	323	200
Okla.	-	-	-	107	507	277	479
Tex.	-	-	-	723	45	4	-
Mont.	17	-	1	24	-	-	-
Idaho	285	168	227	337	605	1,488	1,336
Wyo.	-	-	-	-	-	842	804
Colo.	1,018	1,186	1,037	1,298	1,177	1,424	1,622
N. Mex.	-	-	3	-	-	-	-
Ariz.	671	516	636	623	489	259	15
Utah	-	104	-	1	-	-	-
Nev.	49	-	-	-	-	-	-
Wash.	79	236	352	519	631	913	158
Oreg.	300	229	568	504	454	566	344
Calif.	2,403	3,330	2,748	4,141	4,324	2,921	2,992
U. S.	96,698	103,697	103,029	116,124	123,989	119,366	116,342

Table 3 .- Historic Revisions of All Other Cheese Than Whole Milk and Full-skim American and Cottage Cheese, by States, 1918-1939 (Continued)

State	1933	1934	1935	1936	1937	1938	1939
			--- Thousand Pounds ---				
Maine	-	81	-	-	-	-	-
N. H.	-	-	-	-	-	-	-
Vt.	163	176	205	369	539	434	729
Mass.	395	479	323	710	692	689	1,324
R. I.	-	13	15	21	21	20	20
Conn.	74	89	50	10	120	126	140
N. Y.	25,129	28,073	29,428	28,104	28,452	32,332	33,379
N. J.	500	700	904	845	800	1,396	1,361
Pa.	2,238	2,615	3,012	2,960	4,349	6,140	8,432
Ohio	6,798	7,845	8,334	7,870	7,835	7,974	8,044
Ind.	1,377	663	675	70	11	26	84
Ill.	5,773	6,982	7,415	7,352	11,156	10,686	11,542
Mich.	770	860	1,342	1,767	1,943	2,091	2,387
Wis.	397	81,101	84,078	87,274	81,333	83,238	86,395
Minn.	77,370	627	630	1,048	934	534	770
Iowa	223	243	234	145	74	77	42
Mo.	104	346	580	293	505	168	178
N. Dak.	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	-	-	-
Nebr.	6	5	83	3	3	-	4
Kans.	2	123	123	137	297	838	524
D. C.	-	-	-	-	-	-	-
Del.	229	63	57	77	103	102	54
Md.	-	-	-	-	-	28	15
Va.	-	-	-	-	-	-	-
W. Va.	-	1	-	-	-	-	-
N. C.	155	-	-	11	-	-	-
S. C.	-	-	-	-	-	-	-
Ga.	-	-	-	-	-	-	-
Fla.	-	-	-	-	-	-	-
Ky.	-	-	-	-	-	-	-
Tenn.	683	1,091	1,034	874	1,324	1,365	1,435
Ala.	-	-	-	-	-	-	40
Miss.	41	43	231	268	13	8	1
Ark.	53	-	-	-	-	98	168
La.	363	313	419	386	329	-	-
Okla.	258	349	473	83	100	150	359
Tex.	1,115	1,410	2,076	2,345	3,129	3,510	2,577
Mont.	3	-	-	-	-	-	-
Idaho	2,328	1,754	2,019	2,603	2,787	2,603	2,208
Wyo.	1,286	1,747	1,713	1,403	1,261	933	918
Colo.	2,146	1,489	1,402	1,817	1,727	1,734	1,163
N. Mex.	-	-	-	10	10	-	-
Ariz.	20	92	269	545	542	393	370
Utah	2	-	-	-	-	-	9
Nev.	61	57	27	22	45	3	-
Wash.	400	294	354	324	293	352	292
Oreg.	349	547	491	358	309	726	414
Calif.	4,245	4,552	5,106	6,244	7,003	6,159	5,851
U. S.	135,370	144,700	153,102	156,348	158,039	164,933	171,229

Table 4 .-- Historic Revisions of Ice Cream Production, by States, 1916-1939

State	1916	1917	1918	1919	1920	1921	1922	1923
	-- Thousand Gallons --							
Maine	500	640	760	968	1,515	1,400	1,440	1,325
N. H.	150	200	240	260	400	460	480	485
Vt.	207	312	347	365	539	610	550	625
Mass.	2,250	2,980	4,020	4,270	6,140	6,350	7,210	9,200
R. I.	820	980	1,190	1,100	1,230	1,075	1,165	1,472
Conn.	1,600	1,720	2,070	2,140	2,600	2,360	2,810	3,250
N. Y.	11,297	11,113	13,472	16,240	18,200	19,050	24,710	25,116
N. J.	2,800	3,035	5,740	5,905	6,110	7,350	7,430	8,100
Pa.	12,840	14,400	18,350	20,500	24,140	27,090	31,200	37,100
Ohio	8,065	7,340	10,500	11,200	13,130	12,975	13,240	15,570
Ind.	3,480	3,490	4,730	5,350	5,100	5,242	5,331	6,430
Ill.	9,065	8,990	11,580	12,855	14,520	15,565	15,400	16,300
Mich.	3,090	3,050	5,080	6,750	6,795	6,650	7,880	8,357
Wis.	2,200	2,610	3,530	4,380	5,803	6,027	6,377	6,632
Minn.	2,430	2,590	3,230	3,921	3,983	3,828	3,851	4,210
Iowa	2,895	3,014	3,768	3,863	3,925	4,037	4,227	4,641
Mo.	2,990	3,145	4,740	4,970	5,855	6,050	6,840	6,840
N. Dak.	304	395	425	439	375	352	445	560
S. Dak.	428	525	779	977	790	660	726	790
Nebr.	1,380	1,720	2,345	2,510	2,310	2,290	2,210	2,290
Kans.	3,960	4,190	2,110	2,200	2,020	2,298	2,690	2,750
D. C.	1,300	1,825	3,322	2,964	2,772	2,348	2,030	2,400
Del.	135	145	175	170	320	350	369	649
Md.	1,590	1,820	3,200	3,520	4,160	3,850	3,850	4,090
Va.	1,560	1,920	3,071	2,202	2,203	2,132	2,546	2,996
W. Va.	790	1,095	1,750	1,870	2,190	2,465	2,415	2,890
N. C.	695	970	1,320	1,365	1,845	1,975	1,860	2,250
S. C.	275	395	640	545	570	395	460	619
Ga.	850	1,490	2,690	1,995	1,965	1,680	1,640	1,898
Fla.	365	2,216	1,257	940	1,090	1,005	1,080	1,165
Ky.	680	780	1,275	1,240	1,390	1,180	1,610	2,020
Term.	1,230	1,490	1,965	1,795	1,995	1,910	1,970	2,170
Ala.	700	1,169	1,732	1,781	1,754	1,580	1,500	1,620
Miss.	137	229	494	547	594	495	645	820
Ark.	428	630	1,069	835	935	725	765	1,075
La.	420	475	985	850	930	895	1,230	1,350
Okla.	1,147	1,619	2,188	2,050	2,260	1,950	2,090	2,175
Tex.	2,540	3,300	5,686	5,155	5,470	4,890	4,750	5,065
Mont.	177	297	427	611	551	481	471	640
Idaho	175	250	260	295	280	240	280	324
Wyo.	98	134	110	132	146	167	155	198
Colo.	690	870	1,130	1,386	1,397	1,395	1,760	1,780
N. Mex.	31	44	59	50	40	38	46	42
Ariz.	154	206	262	229	273	225	248	225
Utah	300	348	425	540	472	466	542	590
Nev.	38	47	54	70	92	97	129	93
Wash.	850	1,480	2,150	2,110	2,295	2,190	2,120	2,815
Oreg.	488	706	1,115	1,137	1,310	1,150	1,410	1,410
Calif.	2,970	4,130	4,995	5,435	6,469	7,573	7,438	8,865
U. S.	93,564	106,419	142,912	152,982	171,248	175,366	191,091	214,277

Table 4 .- Historic Revisions of Ice Cream Production, by States, 1916-1939 (Continued)

State	1924	1925	1926	1927	1928	1929	1930	1931
			Thousand Gallons					
Maine	1,388	1,443	1,425	1,525	1,550	1,625	1,623	1,459
N. H.	493	546	604	750	790	800	885	900
Vt.	725	585	61	715	765	800	743	646
Mass.	9,000	10,300	10,400	11,525	10,680	11,225	11,146	9,890
R. I.	1,425	1,680	1,834	1,834	1,875	1,954	1,710	1,603
Conn.	3,315	3,590	3,450	3,340	3,370	4,050	3,640	3,260
N. Y.	28,700	27,180	26,425	29,761	32,144	35,584	33,351	37,265
N. J.	7,990	9,100	9,500	11,300	10,150	10,560	7,875	7,198
Pa.	34,400	36,846	33,800	33,967	34,815	37,230	37,404	31,690
Ohio	15,010	17,500	17,000	17,121	17,270	17,300	15,542	13,880
Ind.	16,050	6,915	6,830	7,174	6,850	7,400	6,430	5,430
Ill.	9,971	20,000	20,100	20,530	21,100	22,600	21,900	18,600
Mich.	6,450	9,778	10,165	10,371	11,272	13,300	11,309	10,339
Wis.	4,370	6,964	6,850	7,647	7,814	8,894	8,609	6,598
Minn.	4,370	5,725	5,729	5,419	5,459	5,934	5,980	5,411
Iowa	6,450	5,320	6,400	5,400	6,000	6,167	6,167	4,604
Mo.	525	7,600	7,460	7,500	6,900	8,100	7,100	6,934
N. Dak.	690	785	993	904	1,086	1,135	948	789
S. Dak.	2,250	2,570	2,575	2,615	3,100	3,195	2,938	2,389
Nebr.	2,700	3,506	3,360	3,414	3,480	3,850	3,818	2,922
Kans.	2,080	2,650	2,400	2,515	2,425	2,437	2,382	2,378
D. C.	573	598	589	705	595	683	1,116	1,111
Del.	3,985	4,150	4,290	4,400	4,250	4,409	4,265	3,615
Md.	2,555	2,584	2,466	2,888	2,801	2,959	2,895	2,828
Va.	2,650	2,900	2,700	2,860	2,237	2,466	2,279	1,890
W. Va.	2,100	2,690	2,600	3,024	2,860	2,612	1,970	1,750
N. C.	779	734	745	932	890	1,090	912	756
S. C.	1,780	2,140	2,050	2,075	1,786	1,885	1,525	1,450
Ca.	1,820	3,010	3,271	2,974	2,413	2,487	1,849	1,916
Fla.	1,995	2,340	2,400	2,500	2,710	3,320	2,800	1,675
Ky.	2,040	2,640	2,768	2,820	2,270	3,119	2,640	2,345
Tenn.	1,570	1,640	1,825	1,900	1,620	1,836	1,371	1,190
Ala.	766	870	895	1,400	1,499	1,701	1,207	894
Miss.	1,050	1,200	920	990	960	1,133	865	675
Ark.	1,220	1,325	1,345	1,390	1,288	1,474	1,350	1,090
La.	2,120	2,654	2,576	2,800	2,910	3,220	2,725	1,816
Okla.	5,160	5,840	5,990	6,460	6,550	6,980	5,830	4,990
Tex.	565	610	617	711	908	990	863	720
Mont.	370	382	389	464	624	693	701	563
Idaho	225	238	255	245	340	453	362	296
Wyo.	1,920	1,955	2,053	2,292	2,536	2,667	2,513	2,300
Colo.	54	101	111	176	169	262	215	157
N. Mex.	370	395	390	487	524	686	555	498
Ariz.	687	863	849	855	899	1,101	949	901
Utah	104	113	138	130	122	154	137	133
Nev.	2,818	3,190	3,207	3,838	3,804	4,074	3,599	3,202
Wash.	1,550	1,720	2,053	2,100	2,350	2,561	2,305	1,700
Oreg.	10,057	11,456	12,097	13,667	14,057	16,078	14,739	13,809
Calif.	213,325	240,018	238,333	251,385	253,967	277,237	255,439	226,437
U. S.								

Table 4.--Historic Revisions of Ice Cream Production, by States, 1916-1939 (Continued)

State	1932	1933	1934	1935	1936	1937	1938	1939
	-- Thousand Gallons --							
Maine	987	864	1,115	1,196	1,392	1,619	1,535	1,572
N. H.	592	405	455	505	530	610	675	723
Vt.	510	418	508	563	663	862	767	733
Mass.	8,035	7,275	8,275	10,085	10,355	12,265	10,962	11,990
R. I.	1,331	1,428	1,480	1,735	2,040	2,270	2,410	2,955
Conn.	2,720	2,310	2,415	2,645	2,940	3,460	3,355	3,457
N. Y.	27,400	25,761	28,784	29,842	35,274	38,555	38,769	40,666
N. J.	4,672	3,982	4,940	5,195	6,225	7,205	7,524	7,336
Pa.	22,475	20,770	25,640	29,675	34,930	39,449	38,077	39,918
Ohio	10,155	10,900	13,510	14,255	17,500	19,425	18,790	19,842
Ind.	3,960	3,950	4,295	5,290	6,425	7,425	7,659	8,281
Ill.	13,460	12,710	14,435	14,560	16,680	19,200	19,128	20,128
Mich.	8,483	7,862	9,015	11,217	14,063	15,743	14,202	15,080
Wis.	4,661	3,963	4,527	5,878	7,481	9,143	8,646	9,271
Minn.	3,660	3,520	4,198	4,956	5,878	6,986	7,763	8,150
Iowa	2,994	3,507	3,898	4,303	5,524	5,742	6,280	6,843
Mo.	5,500	4,880	4,860	6,085	7,475	8,235	8,210	8,500
N. Dak.	431	463	507	706	787	865	927	956
S. Dak.	522	562	676	833	1,062	1,151	1,132	1,271
Nebr.	1,521	1,472	1,872	2,523	2,835	2,661	2,400	2,725
Kans.	2,483	1,794	2,013	2,272	3,342	3,904	3,553	3,685
D. C.	2,031	2,002	2,329	2,726	3,235	3,397	3,566	3,878
Del.	885	884	964	1,127	1,409	1,543	1,407	1,441
Md.	2,480	2,879	3,432	3,894	4,257	4,958	5,025	5,262
Va.	1,784	2,021	2,687	2,892	3,538	3,735	3,757	4,026
W. Va.	1,204	1,364	1,614	1,890	2,305	2,952	2,687	2,815
N. C.	1,300	1,647	2,150	2,895	2,816	3,758	3,923	3,843
S. C.	470	500	600	880	720	985	864	1,274
Ga.	1,180	1,325	1,480	1,953	2,088	2,662	2,670	2,786
Fla.	1,403	1,590	1,860	2,291	2,140	2,470	2,903	3,210
Ky.	1,241	1,109	1,272	1,657	1,575	1,855	1,976	2,106
Tenn.	1,845	1,825	2,391	2,708	3,330	3,920	3,585	4,378
Ala.	800	1,067	1,250	1,643	1,700	1,909	2,170	2,170
Miss.	521	591	817	1,017	1,195	1,490	1,156	1,414
Ark.	550	500	650	850	840	870	1,105	1,285
La.	888	1,117	1,243	1,873	2,093	2,150	2,205	2,595
Okla.	1,302	1,575	2,124	2,846	3,690	3,277	3,387	3,561
Tex.	4,025	5,220	7,350	8,800	10,116	10,630	10,638	10,816
Mont.	507	511	673	833	1,196	1,355	1,317	1,427
Idaho	366	368	565	665	854	1,098	985	972
Wyo.	197	141	143	248	179	320	349	273
Colo.	1,651	1,558	2,121	2,312	2,656	2,915	2,827	3,105
N. Mex.	97	111	162	218	281	368	372	463
Ariz.	350	300	428	475	510	910	732	752
Utah	598	532	763	974	1,163	1,221	1,073	1,073
Nev.	100	90	86	111	161	196	175	215
Wash.	2,468	2,093	2,496	2,882	3,673	3,891	3,926	4,420
Oreg.	1,106	1,033	1,276	1,568	1,923	2,092	2,648	19,501
Calif.	10,049	9,043	11,216	12,947	15,641	17,355	16,564	19,501
U. S.	167,950	161,792	191,560	219,134	258,585	291,057	286,366	305,772

Milk Production and Utilization, 1924-52

Data on the production and utilization of milk in the United States for 1924-52 are shown in Table 5. On the production side are included the milk produced on farms as estimated by the Crop Reporting Board and a "total" production which contains, in addition, a rough allowance for milk produced by cows not on farms. On the utilization side are shown separate estimates of (1) Milk equivalent of individual factory dairy products as recently revised, (2) milk equivalent of farm-churned butter as published in "Farm Production, Disposition, and Income From Milk", (3) fluid milk and cream consumption by the total farm population, differing from the series previously carried in this table in that it includes an allowance for consumption of fluid milk and cream by people on farms not producing milk, (4) consumption of fluid milk and cream by the nonfarm population as recently revised, (5) milk fed to calves as published in "Farm Production, Disposition, and Income From Milk", (6) an export and storage figure that represents milk equivalent of the net foreign trade in milk and cream plus the net movement of cream into storage as determined by the change in cold storage stocks between the beginning and end of year, and (7) an "other" figure representing the difference between the total milk production and the sum of the specified items of milk utilization.

Total United States milk production, including output of both farm and town milk cows, increased rather steadily from about 94 billion pounds in 1924 to 107 billion in 1933, dropped back a little in the middle 1930's, then continued to climb till 120 billion pounds was reached in 1942. During World War II and the immediate postwar years, milk production fluctuated between 118 and 121 billion pounds, and in the period from 1948 through 1952 ranged between 114 and 117 billion pounds.

Of the 115½ billion pounds of milk produced in 1952, some 51 billion pounds was used for production of factory dairy products, 4½ billion pounds for farm-churned butter, 11½ billion pounds for fluid milk and cream consumption on farms, some 44 billion pounds for nonfarm consumption of fluid milk and cream, nearly 3½ billion pounds for feeding calves, and about 1 billion pounds for other purposes. Utilization of milk for making factory dairy products over the period since 1924 was characterized by steady moderate increases to 1940, a sharp upturn early in World War II to a peak in 1942, then a drop to lower levels during the following decade. The net amount of milk used for this purpose ranged from 39 billion pounds in 1924 to almost 61 billion pounds in 1942, dropped rapidly to 52 billion in 1946 and since that time has ranged between 51 and 56 billion pounds. In 1952, manufactured dairy products utilized 44 percent of the total milk produced compared with 42 percent in 1924. Farm churning of butter was on a downward trend over most of the period since 1924, accounting for some 13 billion pounds of milk in 1924, around 11 billion pounds in the middle 1930's, 7 billion pounds in the mid-1940's, and about 4½ billion pounds in 1952. Milk used for farm butter in 1952 represented 4 percent of the total milk produced compared with 14 percent in 1924.

Fluid consumption of milk and cream on farms was maintained at a fairly steady level from 1924 through the 1930 decade, but declined considerably since that time. In 1952, farm fluid consumption accounted for 10 percent of the total milk produced compared with 14 percent in 1924. Consumption of fluid milk and cream by the nonfarm population has been on a general upward trend over most of the period, but was interrupted by temporary declines in the early 1930's, and again in the late 1940's. Milk used for nonfarm fluid consumption increased from 26 billion pounds in 1924 to about 29 billion in the late 1920's, dropped back to around 27 billion in the middle 1930's, increased again to about 31 billion pounds in 1940, rose sharply during the war period to a high point of 42 billion pounds in 1946, dropped back to less than 41 billion pounds in 1948 and since that time has been gradually increasing. In 1952, nonfarm fluid consumption represented 38 percent of the total milk production compared with 27 percent in 1924. In Table 5 are found detailed data on milk produced and used for different purposes from 1924 through 1952, including data for individual factory products and for the miscellaneous smaller uses not discussed in detail.

Perfect balance not possible with available data

The purpose of bringing together the several milk production and utilization items into a table of this type is to show the principal sources of milk produced and the principal items of utilization. In preparing any balance sheet on milk there are, of course, some items which are too small to justify setting forth individually, and others known to exist but for which data are not available. To consolidate these together with any unexplained differences between independently prepared estimates of production and utilization items there is carried on the utilization side of the table an "other" figure that represents the difference between estimated production and accounted-for utilization which also involves estimates. Over the

1924-52 period, this has averaged about 1 billion pounds or roughly 1 percent of milk production, but from year to year has varied appreciably. Some of the principal factors contributing to changes in the "other" figure are outlined briefly below for the benefit of those not thoroughly familiar with the limitations of the estimates for individual items included in the table.

Some minor items of utilization for which data are not currently available would make a regular positive contribution to the "other" figure contained in this table. These include milk or butterfat used for making minor dairy products, candy, bakery products, and other commercial items which use milk and cream directly. Also included would be small losses of milk or fat at various points between the farm and the final utilization product, including such items as spillage of milk on farms after measurement of production but prior to delivery at plants, losses of fat in skimming of farm-separated cream, milk or fat in cans not completely emptied at plants, and plant losses in the fluid processing channels. These items are known to account for small quantities of milk which vary from year to year, but since no annual data on them are available, it is impossible to incorporate figures in a balance table.

There are also a number of items that might affect the "other" item either positively or negatively. Since milk equivalent of utilization items is computed on a butterfat usage basis, changes in the fat content in the milk produced or utilized for various purposes, changes in the fat content of factory dairy products, and variations in the fat content of fluid milk as affected by plant standardization practices, unless specifically measured, result in some variations in balance between production and use items. Over the period since 1924, the test of milk produced on farms has varied about $1\frac{1}{2}$ percent. Since milk production shown in the table is in terms of fat content as produced, but the utilization of milk for various purposes has been computed largely in terms of constant fat test of product and of milk utilized for that purpose, this variation of fat content of milk produced could result in differences in the "other" use item up to nearly 2 billion pounds of milk equivalent. Factors used for converting a large part of the manufactured dairy products into milk equivalents have been essentially unchanged over the 29-year period due to lack of information on year-to-year changes in fat content of product or milk used in making it. The fat test of milk sold for city consumption over a period of years appears also to have varied considerably, but data have not been sufficient to make year-to-year allowances in computing quantities of milk represented. There are also inherent errors of estimate in both the production and utilization items in the table. An error of 1 percent in estimating either milk production or total listed utilization items could change the "other" use item by more than 1 billion pounds and, if simultaneously in opposite directions, by twice that amount. On the production side, the allowance included in the table for milk produced by cows not on farms is subject to considerable question. No factual data on this item have been collected since 1930, and the allowances for recent years represent simply judgment figures, errors in which could easily approach one-half billion pounds of milk. Any inaccuracies of this item would be carried into the "other" use figures in the table. Since farm milk production estimates are based on sample data, they are subject to unknown year-to-year errors of sampling. On the utilization side, quantities of factory dairy products for recent years represent essentially enumerations, but in the early part of the period are partially estimated and the milk equivalent computations are based on sample-determined factors and, as such, are subject to errors of estimate. For nonfarm fluid milk and cream consumption, basic estimates covering some two-fifths of the population represented were determined from sample data, and figures have been projected from year to year on the basis of sales data in a sample of markets representative mostly of large cities under Federal or State control. Similarly, the items of farm use such as farm consumption of fluid milk, milk used for farm-churned butter, and milk fed to calves are estimates from sample data, and subject to appreciable year-to-year variation due to sampling causes.

Because of the many sources of possible errors in the production and utilization items included in the balance table, a small and somewhat variable "other" use item is to be expected in such a table. Moderate year-to-year changes in such a balance figure should not be associated with any one of the individual production or use items appearing in the table, but rather should be taken as a recognition that, on the basis of data that can be obtained with present funds and resources, not all factors can be accounted for and none of the estimates has reached a state of absolute perfection.

Table 5: Production and Utilization of Milk, United States, 1924-33

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
	Million Pounds									
Milk production										
On farms	89,240	90,699	93,325	95,172	95,843	98,988	100,158	103,029	103,810	104,762
Total 1/	93,660	94,940	97,404	99,018	99,367	102,133	102,984	105,629	106,310	107,162
Utilization (milk equivalent)										
Manufactured in plants										
Creamery butter, total	28,946	29,756	30,745	32,150	31,376	33,365	33,064	34,431	35,009	36,457
From whey cream	331	352	329	324	336	353	360	352	345	385
Net	28,615	29,404	30,416	31,826	31,040	33,012	32,704	34,079	34,664	36,072
Cheese										
American	3,853	4,100	3,808	3,686	3,858	3,958	3,971	3,902	3,838	4,252
Other	920	972	924	988	986	1,094	1,186	1,142	1,113	1,268
Canned milk										
Evaporated	2,558	2,585	2,491	2,739	2,875	3,223	3,112	3,072	3,377	3,694
Sweetened condensed	412	411	341	355	306	321	267	213	155	119
Bulk condensed milk										
Unsweetened	202	277	212	247	218	372	312	269	234	213
Sweetened	103	97	121	86	84	112	136	99	92	89
Dry whole milk	60	68	81	87	73	101	118	96	91	97
Frozen dairy products										
Ice cream, total	2,999	3,428	3,404	3,630	3,708	4,138	3,820	3,396	2,523	2,416
Other 2/, total	618	706	701	748	764	837	780	719	541	527
Fat from other products 3/ ..										
Net from milk and cream ..	2,381	2,722	2,703	2,882	2,944	3,301	3,040	2,677	1,989	1,895
Other factory products 4/ ..	68	62	71	77	84	85	88	76	60	60
Total factory products 5/ ..	39,172	40,698	41,168	42,973	42,468	45,579	44,934	45,625	45,613	47,759
Farm butter	13,245	12,736	12,734	12,436	11,793	11,046	10,647	11,061	11,820	11,798
Fluid consumption, farm 6/ ..	13,300	13,300	13,200	13,000	12,900	12,700	12,900	13,500	14,100	14,400
nonfarm	25,600	26,300	27,000	27,600	28,300	29,300	29,200	28,600	28,800	28,500
Fed to calves	2,742	2,784	2,858	2,901	2,944	3,012	2,986	2,997	2,859	2,878
Exports and storage 7/	-421	-528	-546	-474	-372	-301	-155	-151	87	2
Other 8/	22	-350	990	582	1,334	797	2,472	3,997	3,031	1,825

1/ Includes an allowance for milk produced by cows not on farms.

2/ Milk sherbet, ice milk, and miscellaneous minor frozen products.

3/ Milk equivalent of butter and condensed milk used in ice cream.

4/ Includes dry cream, malted milk, dry part skim milk, dry ice cream mix, and cottage cheese.

5/ Includes net milk equivalents of butter and frozen dairy products to avoid double counting of milk from which fat was reused in making a second dairy product.

6/ Includes an allowance for fluid consumption on farms not producing milk.

7/ Net movement of whole milk or cream into export or storage channels. A negative figure represents net imports or net out-of-storage movement during the year.

8/ Residual, including miscellaneous minor uses and any inaccuracies of independently determined production and use items.

Table 5 (continued):—Production and Utilization of Milk, United States, 1934-43

	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
	M i l l i o n P o u n d s									
Milk production										
On farms.....	101,621	101,205	102,410	101,908	105,807	106,792	109,412	115,088	118,533	117,017
Total 1/.....	104,021	103,605	104,710	104,208	108,107	108,992	111,512	117,088	120,433	118,517
Utilization (milk equivalent)										
Manufactured in plants										
Creamery butter, total.....	35,087	33,892	33,830	33,685	36,430	36,167	37,349	38,077	35,938	34,460
From whey cream.....	412	440	454	456	506	496	548	666	775	698
Net.....	34,675	33,452	33,376	33,229	35,924	35,671	36,801	37,411	35,163	33,762
Cheese										
American.....	4,536	4,873	5,038	5,030	5,703	5,475	6,115	7,612	9,247	7,743
Other.....	1,365	1,437	1,479	1,497	1,555	1,632	1,747	1,945	1,874	2,179
Canned milk										
Evaporated.....	3,677	3,947	4,385	4,065	4,490	4,637	5,266	7,023	7,592	6,594
Sweetened condensed.....	134	117	104	105	91	76	137	268	147	278
Bulk condensed milk										
Unsweetened.....	226	250	316	325	313	261	312	278	307	249
Sweetened.....	94	80	107	104	103	119	165	172	163	145
Dry whole milk.....	120	156	137	103	162	185	223	347	474	1,052
Frozen dairy products										
Ice cream, total.....	2,851	3,253	3,845	4,326	4,247	4,536	4,712	5,754	6,795	5,106
Other 2/, total.....	11	12	17	20	20	46	96	112	117	230
Fat from other products 3/..	617	700	808	904	889	956	983	1,213	1,457	813
Net from milk and cream...	2,245	2,565	3,054	3,442	3,378	3,625	3,825	4,653	5,455	4,523
Other factory products 4/.....	64	73	91	100	97	121	132	161	209	339
Total factory products 5/.....	47,136	46,950	48,067	48,000	51,816	51,802	54,723	59,870	60,631	56,864
Farm butter.....	11,343	10,931	10,163	9,548	9,173	8,653	8,129	7,967	7,365	6,860
Fluid consumption, farm 6/.....	14,400	14,100	13,800	13,700	13,700	13,900	13,700	13,500	13,300	12,700
nonfarm.....	26,900	27,900	29,000	29,500	29,600	30,200	30,600	31,600	34,800	37,500
Fed to calves.....	2,688	2,676	2,755	2,724	2,850	2,967	2,994	3,124	3,294	3,276
Exports and storage 7/.....	-100	35	43	-123	151	-89	13	142	-116	212
Other 8/.....	1,654	1,013	862	859	817	1,559	1,353	885	1,159	1,105

1/ Includes an allowance for milk produced by cows not on farms.

2/ Milk sherbet, ice milk, and miscellaneous minor frozen products.

3/ Milk equivalent of butter and condensed milk used in ice cream.

4/ Includes dry cream, malted milk, dry part skim milk, dry ice cream mix, and cottage cheese.

5/ Includes net milk equivalents of butter and frozen dairy products to avoid double counting of milk from which fat was reused in making a second dairy product.

6/ Includes an allowance for fluid consumption on farms not producing milk.

7/ Net movement of whole milk or cream into export or storage channels. A negative figure represents net imports or net out-of-storage movement during the year.

8/ Residual, including miscellaneous minor uses and any inaccuracies of independently determined production and use items.

Table 5 (continued): Production and Utilization of Milk, United States, 1944-52

	1944	1945	1946	1947	1948	1949	1950	1951	9/ 1952
	M i l l i o n P o u n d s								
Milk production									
On farms.....	117,023	119,828	117,697	116,814	112,671	116,103	116,602	114,841	115,117
Total 1/.....	118,123	120,628	118,697	118,114	113,671	117,003	117,302	115,341	115,517
Utilization (milk equivalent)									
Mamufactured in plants									
Creamery butter, total.....	30,620	28,065	24,145	27,430	24,980	29,149	28,641	24,906	24,378
From whey cream.....	713	780	772	830	771	842	838	817	815
Net.....	29,907	27,285	23,373	26,600	24,209	28,307	27,803	24,089	23,563
Cheese									
American.....	8,090	8,777	8,058	9,394	8,597	9,384	8,972	8,791	8,551
Other.....	2,045	2,346	2,894	2,381	2,332	2,569	2,863	2,778	3,089
Canned milk									
Evaporated.....	7,384	8,147	6,567	6,899	7,271	5,898	6,177	6,221	6,086
Sweetened condensed.....	330	339	269	389	295	234	143	135	125
Bulk condensed milk									
Unsweetened.....	289	310	237	423	483	492	537	558	533
Sweetened.....	138	167	151	179	98	102	85	92	105
Dry whole milk.....	1,355	1,650	1,421	1,250	1,293	956	952	999	774
Frozen dairy products									
Ice cream, total.....	5,354	5,788	9,558	8,698	8,027	7,835	7,808	8,017	8,363
Other 2/, total.....	230	306	143	152	194	292	387	472	561
Fat from other products 3/.....	860	925	1,501	1,341	1,501	1,306	1,301	1,488	1,399
Net from milk and cream.....	4,724	5,169	8,200	7,509	6,720	6,821	6,894	7,001	7,525
Other factory products 4/.....	678	949	552	514	561	561	724	939	930
Total factory products 5/.....	54,940	55,139	51,722	55,538	51,859	55,324	55,170	51,603	51,281
Farm butter.....	6,621	6,714	6,557	6,154	5,808	5,440	5,160	4,910	4,514
Fluid consumption, farm 6/.....	12,900	12,800	13,100	12,600	12,100	11,800	11,500	11,500	11,400
nonfarm.....	38,400	40,700	42,200	41,100	40,600	41,200	42,200	43,300	44,200
Fed to calves.....	3,256	3,290	3,228	3,194	3,064	3,163	3,286	3,450	3,348
Exports and storage 7/.....	-148	-39	487	-341	128	-222	-56	116	79
Other 8/.....	2,152	2,024	1,403	-131	112	298	42	462	695

1/ Includes an allowance for milk produced by cows not on farms.

2/ Milk sherbet, ice milk, and miscellaneous minor frozen products.

3/ Milk equivalent of butter and condensed milk used in ice cream.

4/ Includes dry cream, malted milk, dry part skim milk, dry ice cream milk, and cottage cheese.

5/ Includes net milk equivalents of butter and frozen dairy products to avoid double counting of milk from which fat was reused in making a second dairy products.

6/ Includes an allowance for fluid consumption on farms not producing milk.

7/ Net movement of whole milk or cream into export or storage channels. A negative figure represents net imports or net out-of-storage movement during the year.

8/ Residual, including miscellaneous minor uses and any inaccuracies of independently determined production and use items.

9/ Preliminary.





